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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-02-26-08** **Date: 01-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 8th cross left side in Santosh Nagara in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal.K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/268/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	26-02-18
Sample ID No	:	2018-02-26-08 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	27-02-18
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.45	_
2	Finess by Air permeablity method (m^2/kg,Min)	265.6	225m^2/kg, Min
3	Density (gm/cc)	3.12	_
4	Standard Consistency (%)	28.0%	Not specified
5	Initial Setting time	175 minutes	Not less than 30 minutes
6	Final Setting time	260 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm

AE-13

Note:

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Authorized Signatory
Quality Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2018-02-26-08** **Date: 27-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 8th cross left side in Santosh Nagara in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal.K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/268/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	26-02-18
Sample ID No	:	2018-02-26-08 /01
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	27-02-18
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	27.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	38.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	54.5N/mm^2	Not less than 53 N/mm^2

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ಕಾರ್ಯಪಕ ಅಭಿಯಂತರರು ಅಧೀಕ್ಷಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2018-02-26-08** **Date: 01-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 8th cross left side in Santosh Nagara in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal.K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/268/17-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	26-02-18
Sample ID No	:	2018-02-26-08 /02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	26-02-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	333	333	2.2	97.8	90-100
3	20 mm	5476	5809	38.7	61.3	30-70
4	10 mm	4634	10443	69.6	30.4	10-35
5	4.75 mm	4233	14676	97.8	2.2	0-5
6	Pan	324	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2018-02-26-08** **Date: 01-03-18**

Sample ID No : 2018-02-26-08 /02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.3	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.6	
3	Specific Gravity	2.68	_
4	Bulk Density(Loose) (Kg/l)	1.54	_
5	Bulk Density(Compacted) (Kg/l)	1.56	_
6	Water Absorption(%)	0.24	_

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ಶಿಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2018-02-26-08** **Date: 01-03-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 8th cross left side in Santosh Nagara in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal.K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer Reference	:	EE/DD/WO/268/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	26-02-18
Sample ID No	:	2018-02-26-08 /02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	26-02-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	243	243	4.9	95.1	90-100
3	10 mm	2486	2729	54.6	45.4	25-55
4	4.75 mm	2134	4863	97.3	2.7	0-10
5	Pan	137	5000	100	0	–

AE-13

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2018-02-26-08** **Date: 01-03-18**

Sample ID No : 2018-02-26-08 /02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	**12.4**	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	**11.5**	
3	Specific Gravity	**2.68**	_
4	Bulk Density(Loose) (Kg/l)	**1.55**	_
5	Bulk Density(Compacted) (Kg/l)	**1.59**	_
6	Water Absorption(%)	**0.23**	_
7	Aggregate crushing Value(%)	**24.2**	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	**23.2**	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

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Quality Manager

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TEST RESULTS OF STEEL

Lab ID	:	**CP-2018-02-26-08** **Date: 28-02-18**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub division, BBMP, Bangalore.
Address	:	Shettyhalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of RCC drains at 8th cross left side in Santosh Nagara in Ward no.13 Shettyhalli Sub division.
Agency	:	Sri. Nischal.K Lakshman, No.3667, 5th cross, 'B' block, Gayatrinagara, Bengaluru-21
Customer's Reference	:	EE/DD/WO/268/17-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	26-02-18
Sample ID No	:	2018-02-26-08 /05
Sample Type	:	Sunvik
Reference to BIS codes	:	IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.
Date of test:	:	27-02-18

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	Sunvik	Fe500	8	0.392	532	652	20.0%	Satisfactory	Satisfactory
2	Sunvik	Fe500	10	0.618	563	671	20.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.889	569	672	19.0%	Satisfactory	Satisfactory

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ಯಂತ್ರ ಉಪಾಭಾಲಕ ಅಭಿಯಂತರರು
ಶಿಕ್ಷಣ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಸಾಕ್ಷ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಪ್ರ.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

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